

REMARKS

Claims 1-13, 22-28, 30 and 39-44 are cancelled. Claims 14-21, 31-38 and 45-61 are pending in the application.

Claims 1-28 and 30-61 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jones, U.S. Patent No. 5,254,210; in combination with Abe, U.S. Patent No. 5,200,388; or over the combination of Jones and Abe in further view of McMillan, U.S. Patent No. 5,316,579. With respect to claims 1-13, 22-28, 30 and 39-44, without admission as to the propriety of the Examiner's rejection applicant cancels such claims in order to reduce the number of issues in the event of an appeal. Applicant reserves the right to reintroduce the subject matter of the cancelled claims in this or a continuing application.

The Examiner is reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: 1) there must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the combined references must teach or suggest all of the claim limitations. Pending claims 14-21, 31-38 and 45-61 are allowable over the cited combinations of Jones, Abe and McMillan for at least the reason that the references, individually or as combined, fail to disclose or suggest each and every element in any of those claims.

Independent claim 14 recites a manifold assembly comprising a body having a plenum chamber. Claim 14 additionally recited first and second precursor feed streams on the manifold body in fluid communication with the plenum chamber at precursor inlets. Claim 14 additionally recites a purge gas stream on the manifold body of an inlet which is upstream of both the first and second plenum chamber precursor inlets, and which is

angled from the plenum chamber precursor inlets to achieve a venturi effect within the plenum chamber relative to the first and second precursor inlets. At page 2 of the present Action the Examiner indicates reliance upon Jones as showing a body comprising a plenum chamber indicating that a plenum chamber is an inherency of any piping conduit and relies upon applicant's Fig. 1. Applicant again notes that, as set forth in applicants previous response, reliance upon applicant's disclosure as supporting a basis of a § 103 rejection is improper. Nothing in the Jones disclosure in any way teaches or suggests a plenum chamber as indicated by the Examiner. The Examiner is again encouraged to review the Board of Patent Appeals and Interferences decision in Appeal Number 03-0877 regarding Patent Application Serial No. 09/601,884 where the Appeal Board found Examiner error where the Examiner failed to provide evidence that a channel disclosed in a reference could be defined to include a plenum chamber. The Examiner's present reliance upon Jones as showing a plenum chamber is similarly unsupported and rejection based upon such contention is accordingly unfounded. If the present rejection is to be maintained, applicant respectfully requests direction to appropriate support for such rejection to allow applicant to fully address the issue.

The Examiner further indicates that the applicant's recited limitations of precursor inlets, precursor gases, purge gases, and purge gas inlets are being treated by the Examiner as intended use rather than structural limitations and are considered not to limit the scope of the claims. The Examiner again indicates reliance upon the Walter decision (*in re* Walter 618 F.2d at 769,205 USPQ at 409 and MPEP § 2106). Applicant again notes that claim 14 clearly recites precursor inlets and purge gas inlets as limitations within the body of the claim. The Walter case relied upon by the Examiner pertains to treating 35 U.S.C. § 112, sixth paragraph, and determination of equivalence for means-plus-function-

claims. Since claim 14 is not a means-plus-function claim, analysis under the Walter decision is inappropriate. The Examiner's reading out of structural distinction between purge gas inlets and process chemical inlets is unfounded and rejection upon such grounds is improper. If the present rejection is to be maintained, applicant requests appropriate supporting authority to be indicated by the Examiner to allow applicant to address the issue.

The Examiner indicates reliance upon Jones as disclosing a gas flow inlet providing a venturi effect within a plenum chamber relative to other gas flow inlets. This is entirely unsupported by the Jones disclosure since such fails to even disclose or suggest a plenum chamber. The Examiner goes as far as to indicate that structure recited in the reference is substantially identical to that of the claims and therefore the venturi effect is presumed to be inherent. Since Jones fails to disclose or suggest a plenum chamber and fails to disclose or suggest the claim 1 recited configuration of precursor feed streams and purge gas streams in fluid communication with the plenum chamber, the Examiner's holding of inherency is entirely unfounded.

Applicant notes that each of the above points was made previously in applicant's response to the June 16, 2004 Office Action. Not one of these points was addressed by the Examiner in the present action. Accordingly, the action does not comply with the requirements of MPEP § 707.07(f). Applicant therefore requests the finality of the present Action to be withdrawn.

For at least the reasons discussed above Jones fails to disclose or suggest the claim 14 recited manifold having first and second precursor feed streams and precursor inlets, and having a purge gas stream in fluid communication with a plenum chamber upstream of both the first and second plenum chamber precursor inlets such that a venturi

effect is provided within the plenum chamber relative to the first and second precursor inlets. The Examiner indicates reliance upon Abe as disclosing a purge inlet to a plenum chamber where the purge inlet is at 90° relative to precursor inlet (present action pages 5-6). However, Abe does not teach or suggest a plenum chamber and accordingly, does not teach or suggest a purge gas inlet into a plenum chamber or a precursor inlet disposed at 90° relative to a purge gas inlet to a plenum chamber. Neither Abe nor Jones discloses or suggests a plenum chamber and accordingly in combination do not suggest the claim 14 recited first and second precursor feed streams in fluid communication with a plenum chamber, or a purge gas stream in fluid communication with a plenum chamber configured to allow a venturi effect within the chamber relative to the first and second precursor inlets.

As indicated at pages 6-7 of the present Action, McMillan is relied upon as showing a gas delivery system having a flange structure on the body. However, the flange structure disclosed by McMillan does not contribute toward suggesting the claim 14 recited plenum chamber. As combined with Abe and Jones, the mounting structure disclosed by McMillan does not contribute toward suggesting the claim 14 recited first and second precursor feed streams on a manifold body in fluid communication with a plenum chamber, and a purge gas stream in fluid communication with the plenum chamber at a purge gas inlet which is upstream of both first and second plenum chamber precursor inlets and configured to provided a venturi effect within the plenum chamber relative to the first and second precursor inlets. Accordingly, independent claim 14 is not rendered obvious by the cited combination of Jones, Abe and McMillan and is allowable over these references.

Dependent claims 15-21 are allowable over Jones, Abe and McMillan for at least the reason that they depend from allowable base claim 14.

Independent claim 31 recites a purge gas inlet into a plenum chamber which is upstream of plenum chamber precursor inlets. Accordingly, claim 31 is allowable over Jones, Abe and McMillan for at least reasons similar to those discussed above with respect to independent claim 14.

Claim 31 additionally recites a plenum chamber outlet at an end of the plenum chamber opposing the purge gas inlet where the body has a structure configured to mount the second end of the plenum chamber to a substrate processing chamber. The Examiner relies upon Fig. 5 of McMillan to support the present rejection indicating that numeric indicator 114/102 indicates a flange structure on the body. As set forth in applicant's previous response, it is unclear as to how the manifold structure disclosed by McMillan teaches or suggests the structure on the manifold body configured to mount the body to a substrate processing chamber inlet as recited in claim 31. Accordingly, McMillan cannot fairly be relied upon as teaching or suggesting the claim 31 recited structure on a manifold body configured to mount to a substrate processing chamber with the plenum chamber outlet proximate to and connected with the substrate processing chamber inlet where the plenum chamber outlet opposes a purge gas inlet to the plenum chamber. Neither Abe nor Jones contributes towards suggesting the claim 31 recited structure on a manifold body configured to mount the plenum chamber outlet with a substrate processing chamber where the plenum chamber outlet opposes a purge gas inlet to the plenum chamber. Accordingly, the combined disclosures of Jones, Abe and McMillan fail to teach or suggest each and every element of independent claim 31 and such claim is allowable over these references.

Dependent claims 32-38 are allowable over Jones, Abe and McMillan, individually or as combined, for at least the reason that they depend from allowable base claim 31.

Independent claim 45 recites an elongate body comprising an elongate plenum chamber having a plurality of precursor inlets received along the longitudinal axis. Claim 45 further recites a purge gas inlet to the plenum chamber at a first longitudinal axis and upstream of all precursor inlets to the plenum chamber. Claim 45 additionally recites that each of the precursor feed streams and purge gas streams comprise elongated segments joining with their respective inlets. Independent claim 45 is allowable over Jones, Abe and McMillan for at least reasons similar to those discussed above with respect to independent claims 14 and 31. Further, not one of Jones, Abe, McMillan or any combination thereof discloses or suggests the recited elongated segments joining with respective inlets.

Dependent claims 46-61 are allowable over Jones, Abe and McMillan for at least the reason that they depend from allowable base claim 45.

For the reasons discussed above, pending claims 14-21, 31-38 and 45-61 are allowable. Applicant respectfully requests formal allowance of such pending claims in the Examiner's next action.

If any of the present rejections are to be maintained, applicant requests a telephone call to conduct an interview with the Examiner, preferably in the presence of the Examiner's supervisor.

Respectfully submitted,

Dated: April 28, 2005 By: Jennifer J. Taylor
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